REMARKS

Claims 1-12 are pending in the application. Of the claims, Claims 1, 5, and 9 are independent claims. Claims 9-12 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1-12 are rejected as being deemed unpatentable over Chen et al. (U.S. Patent Number 6,658,482) in view of Demuth et al. (U.S. Patent No. 4,450,525). That rejection is respectfully traversed and reconsideration is requested.

Regarding Rejection of claims 9-12 under 35 U.S.C. § 112, second paragraph

Claims 9-12 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In response, claim 9 has been amended to provide antecedent basis for "first memory space".

Removal of the rejections under 35 U.S.C. § 112, second paragraph, is respectfully requested.

Regarding Rejection of claims 1-12 under 35 U.S.C. § 103(a)

Claims 1-12 are rejected as being deemed unpatentable over Chen et al. (U.S. Patent Number 6,658,482) in view of Demuth et al. (U.S. Patent No. 4,450,525). Before discussing the cited reference however, a brief review of the Applicant's disclosure may be helpful.

The Applicant's disclosed invention is directed to a method for updating a lookup table. Access is provided to a first set of routes and associated first subtree entry stored in a first memory space in the lookup table through a first pointer to the first subtree entry. A second set of routes and associated subtree entry is stored in a second memory space in the lookup table. Access is switched to the second set of routes stored in the second memory by replacing the first pointer stored to the first subtree entry with a second pointer to the second subtree entry. (*See* Applicant's specification Page 45, line 7 – Page 47, line 22; Fig. 25.)

The cited prior art, Chen is directed to a method for speeding up Internet Protocol address lookups. The system discussed by Chen includes prefix information tables and lookup tables.

An entry in the prefix information tables is selected based on m or n bits of the IP address. If further bits of the IP address are needed to identify the output port, the selected entry identifies a lookup table which is searched using the next bits of the IP address as an index to find the output port corresponding to the IP address. (*See* Col. 4, lines 4-42.)

In contrast to the Applicant's disclosed method for updating a lookup table, Chen does not even discuss updating a table. Chen merely describes a system that includes tables (prefix information and lookup) for mapping an IP address to an output port. An entry in a prefix information table can store an index to a lookup table to find the output port corresponding to the IP address stored in the lookup table. For example, the output port B corresponding to IP address "24.64.97" is found by (1) finding the entry corresponding to IP address "24.64" in the prefix information table, (2) using the index stored in the selected entry to select a lookup table (LT – 7:24, 64), (3) using the next bits of the IP address that is, '97' to select the entry in the selected lookup table. (*See* Fig. 9, col. 8, lines 1-12.)

The system described by Chen does not teach or suggest at least the Applicant's claimed "providing access to a first set of routes and associated first subtree entry stored in a first memory space in the lookup table through a first pointer to the first subtree entry". Chen does not teach or suggest "a first pointer to the first subtree entry". Chen merely discusses an entry in a prefix information table entry that may include an index that is used to select a lookup table. The index stored in the entry in the prefix information table that is discussed by Chen is not the Applicant's claimed "first pointer to the first subtree entry."

Furthermore, Chen does not teach or suggest the Applicant's claimed "storing a second set of routes and associated second subtree entry in a second memory space in the lookup table while access is provided to the first set of routes stored in the first memory space by the first memory pointer". There is no suggestion in Chen of storing a second set of routes in a second memory space while access is provided to the first set of routes. Only one set of output ports is stored in a lookup table per index in the prefix information table. Thus, Chen merely discusses storing an index to a set of output ports that are stored in a lookup table. There is no discussion of updating any of the tables.

The cited prior art Demuth is directed to data processors. The data processor discussed by Demuth allows chaining of long sequences of signal processing instructions without the need

for external control. (*See* Col. 2, lines 32-50.) The macroinstruction words include pointers to memory (main memory, coefficient memory, scratch pad) allowing the microinstruction words, data and coefficients to be operated upon by the macroinstruction words. (*See* Col. 25, line 65 – Col. 26, line 46.)

The Applicant's disclosed invention allows routes stored in a lookup table to be updated while access is provided to the non-updated routes by replacing the pointer to the subtree entry. (*See* Applicant's Specification Page 44, line 1 through Page 45, line 6.) Demuth's discussion of pointers to memory does not teach or suggest the Applicant's "switching access to the second set of routes stored in the second memory by replacing the first pointer stored to the first subtree entry with a second pointer to the second subtree entry".

One of ordinary skill in the art of Internet Protocol lookups would not look to data processors to provide update of a lookup table as now claimed. Thus, there is no suggestion to combine Chen and Demuth. Even if combined, the present invention as now claimed does not result as argued above.

Therefore, separately or in combination, Chen and Demuth do not teach or suggest the Applicant's claimed invention. Thus, none of the cited prior art alone or in combination makes obvious the Applicant's claimed method for updating a lookup table.

Claims 2-4 are dependent on Claim 1 and thus include this limitation over the prior art. Independent Claims 5 and 9 recite a like distinction in terms of an apparatus and thus similarly patentably distinguish over the prior art.

Accordingly, these claims should be found in allowable condition for the same reasons as claims 1, 5 and 9 above, as well as on the basis of additional limitations in these claims. For example, none of the cited art teaches or suggests the Applicants' claimed "deallocating the first memory space after switching access" as claimed by the Applicant in claim 2. Chen merely discusses that the forwarding table can be updated. However, there is no discussion of how the update of the forwarding table would be performed. Even if the update of the forwarding table was performed by writing over the old entry as suggested by the Office, the overwriting of memory does not teach or suggest "deallocating the memory space" as the entry is still being used (i.e., allocated).

Accordingly the rejection under § 103 is believed to be overcome.

Accordingly, the present invention as now claimed is not believed to be anticipated by or made obvious from the cited art or any of the prior art. Removal of the rejections under 35 U.S.C. 103(a) and acceptance of Claims 1-12 is respectfully requested.

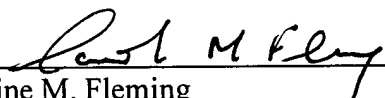Supplemental Information Disclosure Statement

A Supplemental Information Disclosure Statement (SIDS) is being filed concurrently herewith. Entry of the SIDS is respectfully requested.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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